

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as now presently amended, is respectfully requested.

Claims 1-7, 11-13, 15-17, 19, and 20 have been canceled. Claims 8, 9, 10, 14, and 18 have been amended. Claims 8, 9, 10, 14, and 18 are active in the application.

Applicant notes that the patent application having serial number 09/938,911 has been assigned from Tsunami Optics, Inc., to Stratos Lightwave, Inc. Unlike the previous assignee, the current assignee, Stratos Lightwave, Inc., is a non-small entity business concern. Applicant requests the United States Patent and Trademark Office to take notice that the present assignee of the patent application having serial number 09/938,911 is a non-small entity business concern.

Briefly, Applicant's invention is directed to a coarse wave division multiplexer/demultiplexer. Coarse wave division multiplexer/demultiplexers are known in the art. However, known coarse wave division multiplexer/demultiplexers are believed to be constructed of expensive materials and/or parts, are relatively large, and are generally susceptible to vibrations and thermal effects.

In order to solve the above-identified problems, Applicant has invented a device which is relatively inexpensive to produce, is relatively small, and is robust.

Claim 8 has been rewritten in independent form. Amended Claim 8 generally includes the features of Claim 1 from which it originally depended. Amended Claim 8 includes a housing from which the first I/O waveguide extends, and in which the first single-side-pass filter is mounted. Such a design is robust. And as originally filed, amended Claim 8 includes the feature

of the first single-side-pass filter being a short-pass filter. Such a feature provides for a more economical device, since a low-pass filter is generally less expensive than a band pass filter. Support for the claim amendments are found throughout the specification and claims, and more particularly in paragraphs [26] and [36].

Claim 9 has been rewritten in independent form. Amended Claim 9 generally includes the features of Claims 1-5, from which it originally depended. Amended Claim 9 includes a housing from which the first I/O waveguide extends, and in which the first, second, and third single-side-pass filters are mounted. Such a design is robust. And as originally filed, amended Claim 9 includes the feature of the first, second, and third single-side-pass filters being separated by approximately 25.6 nanometers. Such a feature provides for a more economical device since single-side-pass filters are generally less expensive than band pass filters. Furthermore, the separation of 25.6 nanometers ensure that the device is a coarse wave division multiplexer/demultiplexer and not a dense wave division multiplexer/demultiplexer. Thus, the device, as recited in amended Claim 9, is less susceptible to thermal gradients. As compared to amended Claim 14, amended Claim 9 includes six collimator assemblies. Support for the claim amendments are found throughout the specification and claims, and more particularly in paragraphs [26] and [36].

Claim 10 has been rewritten in independent form. Amended Claim 10 generally includes the features of Claims 1-5, from which it originally depended. Amended Claim 10 includes a housing from which the first I/O waveguide extends, and in which the first, second, and third single-side-pass filters are mounted. Such a design is robust. And as originally filed, amended Claim 10 includes the feature of the first single-side-pass filter having a specified wavelength at

approximately 1550.02 nanometers, the second single-side-pass filter having a specified wavelength at approximately 1524.38, and the third single-side-pass filter having a specified wavelength at approximately 1575.62 nanometers. Such a feature provides for a more economical device since single-side-pass filters are generally less expensive than band pass filters. Furthermore, the separation of the specified wavelengths of the single-side-pass filters ensures that the device is a coarse wave division multiplexer/demultiplexer and not a dense wave division multiplexer/demultiplexer. Thus, the device, as recited in amended Claim 10, is less susceptible to thermal gradients. Support for the claim amendments are found throughout the specification and claims, and more particularly in paragraphs [26] and [36].

Claim 14 has been rewritten in independent form. Amended Claim 14 generally includes the features of Claims 1, 12, and 13, from which it depended. Amended Claim 14 includes a housing from which the first I/O waveguide extends, and in which the first, second, and third single-side-pass filters are mounted. Such a design is robust. And as originally filed, amended Claim 14 includes the feature of the first, second, and third single-side-pass filters being separated by approximately 25.6 nanometers. Such a feature provides for a more economical device since single-side-pass filters are generally less expensive than band pass filters. Furthermore, the separation of 25.6 nanometers ensure that the device is a coarse wave division multiplexer/demultiplexer and not a dense wave division multiplexer/demultiplexer. Thus, the device, as recited in amended Claim 14, is less susceptible to thermal gradients. Support for the claim amendments are found throughout the specification and claims, and more particularly in paragraphs [26] and [36].

Claim 18 has been rewritten in independent form. Amended Claim 18 generally includes the features of Claim 1 from which it originally depended. Amended Claim 18 includes a housing from which the first I/O waveguide extends, and in which the first single-side-pass filter is mounted. Such a design is robust. And as originally filed, amended Claim 18 includes the feature of the first single-side-pass filter being curved. Such a feature provides for a more economical device and smaller device since, typically, the curved filter eliminates the need to use expensive and large lenses. Support for the claim amendments are found throughout the specification and claims, and more particularly in paragraphs [26] and [36].

Claims 1-7, 11-13, 15-17, 19, and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Pan, et al.

Claims 1-7, 11-13, 15-17, 19, and 20 have been canceled.

Claims 8, 9, 10, 14, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pan, et al.

The Pan, et al reference was cited for disclosing all of the features recited in originally filed Claims 1-7, 11-13, 15-17, 19, and 20. Claims 8, 9, 10, 14, and 18 recite features beyond the features recited in originally filed Claims 1-7, 11-13, 15-17, 19, and 20. The Examiner states that the Pan, et al reference is deficient as a reference, in regard to Claims 8, 9, 10, 14, and 18, since “the filter is not disclosed as short pass filter or curved filter and also the specific separation between the adjacent filters or specific wavelengths,” are not disclosed. However, the Examiner is of the opinion that the features recited in Claims 8, 9, 10, 14, and 18 are obvious in light of Pan, et al. The Examiner has taken the position that these features “would depend on design parameters and are considered as a matter of design choice, and therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to select single pass or curved filters or specific separation distance between single pass filters and specific wavelengths, in order to obtain desired separation of frequencies or channels.”

The concept of a “design choice” implies that such a choice is but one of many equally similarly obvious choices which are substituted for one another so as to provide the desired result. However, the Examiner’s position ignores the fact that Applicant’s claimed features of the single-side-pass filter being a short-pass filter (Claim 8); the first, second, and third single-side-pass filters being separated by specified wavelengths of approximately 25.6 nanometers (Claims 9 and 14); the first single-side-pass filter having a specified wavelength of approximately 1550.02 nanometers, the second single-side-pass filter having a specified wavelength of approximately 1524.38 nanometers, and the third single-side-pass filter having a specified wavelength of approximately 1575.62 nanometers (Claim 10); and the single-side-pass filter having a curved shape (Claim 18) provide the improved results of being a more economical device, a coarse wave division multiplexer/demultiplexer, and a device which is less susceptible to thermal gradients, and a compact device.

In light of the above, it is not credible to assert that the features, listed above in regard to Claims 8, 9, 10, 14, and 18, which provide for the improved results would merely be a design choice applied to the prior art that lacks the claimed improvements. Therefore, the Pan, et al reference is not believed to in any way anticipate or obviate any of the significant aspects of the present invention as recited in amended Claims 8, 9, 10, 14, and 18.

The disclosure was objected to for containing informalities in paragraphs [40] and [44]. Applicant has reviewed the specification and made numerous corrections so as to remove

informalities found within the specification. Applicant believes that the informalities have been removed. Therefore, Applicant believes that the objections to the specification have been removed.

Claims 4, 5, 9, and 10 were rejected under 35 U.S.C. §112, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” Specifically, the Office Action notes that “Claim 4 recites the limitation “the waveguide of third collimator assembly (line 10) and “the waveguide of fourth collimator assembly” in line 13. There is insufficient antecedent basis for these limitations in the claim. In the same manner, in claim 5, line 3, “the waveguide of second collimator assembly” lacks antecedent basis.”

Applicant has canceled Claims 4 and 5. However, amended Claims 9 and 10 generally include the subject matter of Claims 4 and 5. Applicant has amended Claims 9 and 10 so as to provide proper antecedent basis for the elements recited within Claims 9 and 10. Therefore, Applicant believes that amended Claims 9, and 10 are definite and particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Thus, Applicant believes that amended Claims 9, and 10 are in compliance with 35 U.S.C. §112, second paragraph.

The title was amended so as to provide for the proper spelling of the words of the title. The word “course” was changed to the word “coarse.” Support for the title amendment is found in the second sentence of paragraph [07].

Grammatical and clarify amendments have been made to the title, specification, and also to the claims.

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Amendment A, continued

The above changes to the title, specification, and claims are self-evident from the original disclosure; thus, no new matter has been introduced, and no new issues have been raised.

In view of the foregoing comments, it is respectfully submitted that the claims are definite and in condition for allowance. An early and favorable action to that effect is therefore respectfully requested.

Respectfully submitted,

I hereby certify that this paper and/or fee is being deposited
with the United States Postal Service First-Class mail on this 22nd
day of October, 2003, and is addressed to:
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